

et le corps calleux (corpus callosum). Cet appareil y est réduit à ce point, que l'on a pu dire avec quelque vérité que le corps calleux n'existe pas." The editors then give a detailed account of a dissection of the brain of a kangaroo, confirmatory in all respects of my own, and they rightly remark: " Cette disparition presque totale du corps calleux ne se lie pas à un développement moindre du cerveau. Les hémisphères sont, avec la masse totale de l'encéphale, dans leurs rapports ordinaires, et rien au premier aspect ne ferait soupçonner la disposition de la voûte." They add, probably in reference to Prof. Mayer's statement: " L'observation de M. Owen sur cette disposition du cerveau des Marsupiaux a été repoussée à tort comme erronée. Il ne nie pas l'existence du corps calleux dans les Marsupiaux: il déclare formellement qu'on peut voir, si on le veut, dans ce qui reste de la commissure, le rudiment d'un corps calleux; mais il relève avec raison l'absence dans les Marsupiaux d'un corps calleux comparable à celui des autres Mammifères."—*Loc. cit.* pp. 101, 102.

The interest which you have always shown in the maintenance as well as the discovery of truths in natural history, has induced me to beg permission to trespass thus far on your valuable space.

I have the honour to be, Gentlemen,

Your obedient servant,

London, July 18th, 1845.

RICHARD OWEN.

XI.—*List of Birds found in the vicinity of Tunis and Biserta, from observations made during a month's visit from April 21st to May 21st 1845.* By H. M. DRUMMOND, 42nd R. H.

THE following list of a few of the birds frequenting the N. coast of Africa, as well as a former one of the birds of Crete (vide Ann. Nat. Hist. vol. xii. p. 423), I have been enabled to draw up through the kindness of Capt. Graves, H.M.S. Beacon, in inviting me to accompany him to the above-mentioned places, to whom also I am greatly indebted for the facilities he afforded me in accompanying the boats on an expedition up the lakes of Biserta. This list however is necessarily imperfect, owing to the shortness of my visit, as well as from the passage of the migratory birds being nearly terminated at the time of my arrival. The whole of these birds are found in the vicinity of the Biserta lakes, with the exception of the *Pterocles arenarius*, *P. setarius*, and *Otis houbara*.

The lakes of Biserta are about 40 miles to the westward of Tunis; it was said that they are much more extensive than is really the case, and also that a communication for shipping could easily be opened, rendering the lower lake one of the finest har-

hours in the Mediterranean. That however is out of the question, the channel being so shallow and filled up with sand, that it would be a Herculean task to clear it out, and when done, probably the very first north-easter would fill it up again. The lake, the entrance of which is about a mile from the sea, is a beautiful sheet of water about 20 miles in circumference, and from 3 to 7 fathoms deep. It swarms with various kinds of fish; an extensive weir reaches across the mouth, and the fisheries are very valuable. Benayed, a wealthy Moor, who is the present proprietor, assured us that he pays an annual rent to the Bey of Tunis of nearly 3300*l.* sterling. The surrounding country is most beautiful; it abounds with game, chiefly boars, partridges, hares and wildfowl, and is clothed down to the water's edge with olive-trees and corn-fields. This is I believe the richest district in the regency; I could have fancied myself in one of the most beautiful parts of England, and the climate is delightful. The upper lake is freshwater, and nearly as large as the salt one, but only 6 or 7 feet deep. On the upper part is a deep and extensive marsh, out of which Gibel Tschar rises almost perpendicularly to the height of 2000 feet and upwards. This lake also swarms with fish, chiefly large barbel of 10 lbs. weight, gray mullet (*Mugil Chilo*, Cuv.), basse (*Labrax Lupus*, Cuv.), spotted shad (*Alosa Finta*) and eels. The lakes are connected by a river winding through a rich plain about two miles in extent, more or less cultivated according to the encroachments made by the floods in winter. From the great variety of country, consisting of hill, plain, and undulating ground, olive-groves, thick brushwood, corn-fields, marsh, and rich pastures, it is a very general resort of the feathered tribes, as will be seen from the following list.

Vultur fulvus. } Seen in great numbers on Gibel Tschar,
Cathartes percnopterus. } at the head of the upper lake of Biserta :
 they probably breed there.

Falco tinnunculus. A few seen: breed on the cliffs at Cape Carthage.

F. tinnunculoïdes. } These birds do not appear to remain, as only a
F. rufipes. } few were seen on my first arrival.

F. Bonelli *.

F. brachydactylus *.

F. haliaëtus. Common on the lakes of Tunis and Biserta at the fisheries.

F. albicilla. A few seen in the marshes round the lakes of Biserta.

F. ater *.

F. cyaneus. One or two only.

F. rufus. Found in the marshes: not very common.

* These birds I understand are not uncommon, none however were seen, but having obtained some well-preserved skins of all three species that were shot near Tunis last winter, it is perhaps as well to mention them.

Strix noctua. This is the same species given in a former list of the birds of Corfu under the denomination of *S. passerina* : they are common in the olive-groves about Biserta, and on the approach of any one seem easily disturbed, as I constantly saw them flitting from tree to tree ; probably this may be only during the passage.

S. brachyotus. A few seen at the ruins of Carthage 21st of May, none afterwards.

Corvus Corax. A pair only of these birds were seen : they breed on the cliffs at Cape Carthage.

Coracias garrula. } Common, though none of the nests of these
Oriolus Galbula. } birds were found ; they probably breed in this part of the country, as they were always seen in pairs.

Sturnus unicolor. This is the common starling of the country, and seems (at least at this season of the year) quite to have supplanted the *S. vulgaris*, which I understand is also found, but probably only in the winter ; their habits as also their song, or rather the chattering and long plaintive whistle of the cock-bird, are precisely the same ; they are very common, especially in the neighbourhood of Biserta ; they build on houses as well as in trees, and are also found in small flocks on the muddy parts of the shores of the lakes, in company with stints and ring dottrels, feeding on the larvæ of small marine insects.

Lanius excubitor. One was shot near Tunis ; it is I suspect very rare, as I have only known of one instance of its being shot at Malta, and have never met with it in the Ionian Islands or Levant.

L. minor. Only one seen, probably owing to the passage being nearly over.

L. cucullatus. I obtained a beautiful specimen of this rare bird (at least in Europe) through the kindness of Sir Thomas Reade, H.B.M. Consul General ; it was shot last December along with several others ; they are never seen near the coast, but chiefly frequent the thick brushwood on the sides of the mountains, about twenty miles in the interior, where they are not uncommon.

*L. Collurio**. One individual only : probably rare, as they have never been found in Malta, and are very rare in Corfu.

L. rutilus. Most numerous, the olive-groves round Tunis and Biserta being literally filled with them : breed there.

Muscicapa grisola. Very common : breeds.

M. albicollis. Common.

M. luctuosa. One or two only.

Turdus Merula. Very common at Biserta, making the woods resound with their melody.

T. cyaneus. Only one seen.

Sylvia turdoïdes. A few seen in the marshes at Biserta.

S. palustris. A few seen in the olive-groves.

* It is singular that these birds, which I have found most numerous in the spring and summer months in Switzerland, and also in some parts of England, where they are not uncommon, should be so rare along the shores of the Mediterranean. Query, as they have not been noticed during the autumn passage, where do they go in winter ?

Sylvia Phragmitis. } Both these species are very common in the
S. arundinacea. } vicinity of Carthage, frequenting the high
 standing corn, where they breed.

S. Luscinia. A few met with in the thickets along the shores of
 the upper or freshwater lake.

S. orphea. Common: breed.

S. rubiginosa. Most numerous, especially at Biserta, frequenting
 the olive-groves.

S. atricapilla. Only one or two seen; probably do not remain.

S. melanocephala. Common: breed.

S. cinerea. Common: breed.

S. conspicillata. A pair only of these birds seen 21st April.

S. Phœnicurus. Ditto.

S. hippolais. }
S. trochilus. } One or two seen about the end of April.

Savicola Cœnanthe. A few seen at Biserta 1st of May, none after-
 wards.

S. stapanina *.
S. aurita.
S. rubeira. } A few seen.

S. rubicola. Very numerous: breed.

Motacilla cinereo-capilla. Very common, frequenting the pastures.

Anthus arboreus. }
A. pratensis. } Not uncommon.

Alauda arvensis. }
A. cristata. } Very common, especially the latter: breed.

A. brachydactyla. Very common: found in small flocks on the
 dry sandy grounds near the Goletta of Tunis.

A. Calandra. Very common about the freshwater lake at Biserta,
 also in the immediate vicinity of Tunis: breed.

Parus cœruleus †. Common: breed.

Emberiza Miliaria. Very numerous: breed.

E. Hortulana. Not very common: these birds are kept in cages
 at Tunis, being much prized for their song, and one that sings well
 will fetch as high a price as sixty piastres; the Tunis piastre is equal
 to eightpence.

Fringilla Chloris. Common: breeds.

F. hispaniolensis. This is the common house-sparrow of Barbary;
 it is very numerous, and though frequenting the towns and villages,
 I also found it in large flocks in the country many miles from any
 habitation. I was unable to ascertain whether it also builds in trees,
 or whether these large flocks so late in the season might have been
 occasioned by their being on their passage to Europe; they were en-

* From my own observations I have been unable to decide whether the
stapanina and *aurita* are the same species; probably they are; but it is re-
 markable that out of numbers examined and shot at the same season of the
 year, none should be found in an intermediate state.

† It is curious that the *Parus major* should not have been found, as they
 generally frequent the same localities.

tirely composed of old birds. The eggs of these birds vary like those of the *F. domestica*, which they closely resemble.

Fringilla Cælebs. }
F. cannabina. } Common about Biserta; probably breed there,
F. Montium. } as they were seen as late as the middle of
F. citrinella. } May.
F. Carduelis. }

Cuculus canorus. Common about Biserta.

Upupa Epops. Very common: probably breed: seen as late as the 21st of May.

Merops Apiaster. Very common during the passage: the first of these birds made their appearance this season the 27th of April, none seen after the 15th of May. I could not ascertain if any remain.

Alcedo Ispida. Only one seen at the Goletta 21st of April. I understand they are common in winter.

Hirundo rustica. }
H. urbica. } Most numerous, especially *H. rustica*: I saw no
H. riparia. } signs of their building.

Cypselus alpinus. Only two seen, on the tops of Gibel Tschar.

C. murarius. Very numerous.

Caprimulgus europæus. A few seen as late as the 10th of May.

Columba Livia. Very common: breed in the old wells about the ruins of Carthage.

C. Turtur. Very common: breed in the olive-groves.

Pterocles arenarius. } Very common about ten miles from Tunis
P. setarius. } and throughout the interior: sedentary.

Perdix petrosa. Most numerous, especially at the upper lake of Biserta and throughout the interior; rare in the immediate vicinity of Tunis. A young covey was found as early as the 22nd of May: sedentary.

P. Coturnix. Most numerous, especially about the ruins of Carthage during its passage, which I understand commences about the beginning or middle of March, and lasts until the end of May: a very few only remain.

Hemipodius lunatus. Occasionally found near Tunis and Biserta. Sir Thomas Reade assures me that these birds do not migrate.

Glareola torquata. The first of these birds made their appearance the 24th of April, and after that were most numerous, especially on the muddy flats between the lakes of Biserta, where they were so tame that they would unwillingly take wing though approached within a few feet, and would almost immediately settle again.

Otis houbara.* These birds are never found near the coast, but as they are not unfrequently met with in the interior, it is perhaps as well to mention them. They are very wary and difficult of approach, frequenting the dry arid plains, and are only taken by means of hawking, of which amusement the Arabs are excessively fond. Sedi Mohammed, the Bey of the Camp, keeps a number of falcons trained for the purpose.

* I could obtain no account of the *Otis tarda* ever having been met with in this regency, though it is I believe common in other parts of Barbary.

Otis Tetrax. The Pollo di Cartagini, or Carthage fowl, the name it is generally known by at Tunis; it is held in great estimation for the table, and is consequently rare in the immediate vicinity. I however met with a few, chiefly in the high corn-fields, where at this season they probably have their nests: from the quick vibratory motion of their wings, the flight is so peculiar that they are not easy to be mistaken; they appear when flying almost white.

Edicnemus crepitans. Common: breed in the fallows.

Himantopus melanopterus. A few seen in the marshes at the head of the freshwater lake at Biserta: probably breed there, as they were seen in pairs.

Charadrius Hiaticula. } Common along the shores of the salt lake.
C. minor.

C. cantianus. I never found these birds mixing with the other kinds of dottrels and sandpipers, but they were generally seen scattered about the dry sandy grounds near the Goletta, or in some neighbouring fallow, where on the approach of any one they run most swiftly in preference to taking wing; indeed they are so much the colour of the ground they frequent, that they are not easily detected: though I did not find their eggs, yet I have no doubt they breed there.

Vanellus melanogaster. A few seen on the shores of the saltwater lake.

Strepsilas collaris. Common on the shores of the saltwater lake.

Grus cinerea. These birds were not seen, but Sir Thomas Reade informs me that they are not uncommon in the winter months round the lake of Tunis, and are probably found at Biserta.

G. Virgo. Is also occasionally seen in winter at Tunis, during the breeding-season; they are very common on some of the islands along the coast, especially at Lampidosa.

Ciconia alba*. A few seen at Biserta, in the marshes only.

Ardea cinerea*. Very common.

A. purpurea*. Only one seen.

A. Garzetta*. Very common, especially on the banks of the river that connects the fresh with the salt lake at Biserta.

A. Verany*. A few of these very rare birds I found at the fisheries at Biserta; they seem more addicted to perching than others of the tribe, as when disturbed they would immediately fly for refuge to some tree, where, standing with outstretched neck on the highest part, it is difficult to get near them: though frequenting localities where fish abounded, and which one would suppose to be their natural food, yet on examination I never in any one instance found a vestige of fish in the stomach, but invariably found it to contain the remains of the blind-worm (*Anguis fragilis*); one I found entire and about 8 inches long, also locusts and small beetles.

A. ralloïdes*. Common along the banks of the river between the lakes.

* It is remarkable, that though most of these birds were common about Biserta, none of them should have been found on the borders of the Tunis lake.

Ardea minuta.* Very common in the deep marshes.

Nycticorax ardeola.* Common at the fisheries at Biserta, and generally seen sitting on the reed-fences of which the weirs are composed.

Phœnicopterus antiquorum. Very common on the lake of Tunis, which they seem to monopolize; a few also were seen at Biserta; they are excessively shy and difficult of approach; they do not breed here, but probably go over to Cagliari in Sardinia, as they leave about the beginning of June, at which season they are occasionally met with in Malta, and return in September. I was informed by Sir Thomas Reade that a smaller species inhabits the lake, and though I certainly saw some of a smaller size, yet being unable to procure one, I could not ascertain whether these may be the young or a distinct species.

Recurvirostra Avocetta. One seen on the salt lake at Biserta, which I fortunately procured: these birds I consider to be very rare, for though I have been several years in the Mediterranean, this and another shot at Corfu in April 1841 are the only two of the species I ever obtained.

Ibis falcinellus. } A few seen at Biserta.

Numenius arquatus. }

Totanus fuscus. Common at Biserta: these birds were in the summer plumage, and differed widely from those shot in winter at Corfu; the legs of the present ones were black, with a very slight tinge of orange about the knees.

T. ochropus. } A few seen at Biserta.

T. glareola. }

T. hypoleucos. Common.

T. glottis. A few seen at Biserta.

Scolopax rusticola. } Not found at this season, but are numerous about Biserta in winter.

S. Gallinago. }

S. Gallinula. }

Rallus aquaticus. Only one seen.

Gallinula Porzana. }

G. pusilla. }

G. chloropus. }

Fulica atra. Very numerous on the salt lake: breed in the marshes.

Podiceps cristatus. }

P. cornutus. }

P. avritus. }

} Several seen on the salt lake.

Sterna Hirundo. }

S. nigra. }

S. minuta. }

} Very common about Biserta.

S. leucoptera. A few seen on the river between the lakes.

Larus argentatus. Common: breed.

L. melanocephalus. Large flocks of these birds were seen in the Bay of Tunis 21st of April; none afterwards.

Puffinus cinereus. Very numerous all along the coast: breed.

* See note, preceding page.

Puffinus anglorum. A few seen.

Thalassidroma pelagica. Very common : breed.

Cygnus musicus. A few seen in the lakes of Biserta, and one in the lake of Tunis.

Anas Boschas. Common : breed in the marshes round Biserta.

A. marmorata. I only saw two small flocks of five or six each flying up the river between the lakes ; one of these very rare birds I was fortunate enough to procure ; it proved to be a female.

A. Fuligula. Very numerous : seen on the salt lake *only* in large flocks of two or three hundred ; it is singular that they should be in flocks so late in the season.

Pelecanus onocrotalus. A few seen on the salt lake.

Carbo Cormoranus. Very numerous on both lakes.

XII.—On the British Diatomaceæ. By JOHN RALFS, Esq.,
M.R.C.S., Penzance*.

[With a Plate.]

HOMEOCLADIA, Ag.

Frond membranaceous, tubular, filiform, transversely wrinkled, branched in an umbellate manner ; frustules linear.

1. *H. anglica*, Ag. Fronds umbellate at the base, above elongated and either simple or dichotomous ; frustules linear, many times longer than broad, with striated lateral surfaces. Ag. Consp. Diatom. p. 25 ; Harv. Br. Alg. p. 208 ; Kütz. Die Kieselschaligen Bacillaria oder Diatomeen, p. 110. tab. 30. fig. 82. *Oscillatoria chthonoplastes*, Harv. in Hook. Br. Fl. vol. ii. p. 373. *Microcoleus marinus*, Harv. Br. Alg. p. 168.

On marine rocks, Ilfracombe, and Petitor near Torquay, September and October.

Since my former note on this plant (Ann. Nat. Hist. vol. xi. p. 77) I have examined specimens in a fresh state, and find its structure agrees so closely with Agardh's description of *H. Martiana*, that the difference appears to be but slight. It is brownish when recent and becomes of an opaque olive-brown when dry, and often acquires a metallic lustre, particularly in the Torquay specimens. It arises from a comparatively thick scutate base, but soon divides in an umbellate manner into many branches, each of which is again similarly divided. In this second division the branches, which vary in number from three to five, are elongated, and are either simple or once dichotomous, or occasionally trichotomous. The extremities are often clavate, but not unfrequently slightly attenuated. The frond, which is from one to two inches high, is terete, erect, tubular, with numerous transverse but irregular wrinkles, which produce a crenated appearance of the margin.

* Read before the Botanical Society of Edinburgh.